Contents to volume 243

Publisher's Note: Electronic Manuscripts V

Research Letters

Orientation dependence of the EPR signal from the reduced iron-quinone complex in a single crystal of the reaction center protein from *Rhodopseudomonas viridis* (FEB 06679) *P. Gast, A. Gottschalk, J.R. Norris, G.L. Closs* 1

Light-scattering changes in the bacteriorhodopsin photocycle (FEB 06686) *L.A. Drachev, A.D. Kaulen, V.V. Zorina* 5

The B isozyme of creatine kinase is active as a fusion protein in *Escherichia coli:* in vivo detection by ^{31}P NMR (FEB 06681) *A.P. Koretsky, B.A. Traxler* 8

Synthesis of paf-acether from exogenous precursors by the prokaryote *Escherichia coli* (FEB 06685) *Y. Denizot, E. Dassa, H.-Y. Kim, M.-J. Bossant, N. Salem, jr, Y. Thomas, J. Benveniste* 13

Growth stimulation by bombesin does not involve activation of Na^+/H^+ exchange in chick embryo otic vesicles in vitro (FEB 06680) *J.I. Gillespie, F. Giraldez, J.R. Greenwell* 17

n-Butyrate and dexamethasone synergistically modulate the surface expression of epidermal growth factor receptors in cultured rat hepatocytes (FEB 06678) *I.P. Gladhaug, T. Christoffersen* 21

Dexamethasone regulation of the expression of cytokine mRNAs induced by interleukin-1 in the astrocytoma cell line U373MG (FEB 06688) *T. Nishida, S. Nakai, T. Kawakami, K. Aihara, N. Nishino, Y. Hirai* 25

Dependence of the length of the heavy chain of chymotryptic subfragment 1 on the temperature of myosin digestion (FEB 06690) *B. Pliszka, M.J. Rędowicz, H. Strzelecka-Gołaszewska* 30

A 'branched' mechanism of the reverse reaction of yeast glutathione reductase: An estimation of the enzyme standard potential values from the steady-state kinetics data (FEB 06689) *G.A. Rakauskienė, N.K. Čėnas, J.J. Kulys* 33

Carnitine cycle in brown adipose tissue mitochondria as a tool for studying the regulatory role of fatty acids in the uncoupling protein function (FEB 06687) *P. Ježek, I.P. Krasinskaya, I. Smirnova, Z. Drahota* 37

Characterization of platelet-activating factor-induced elevation of cytosolic free calcium concentration in eosinophils (FEB 06684) *C. Kroegel, R. Pleass, T. Yukawa, K.F. Chung, J. Westwick, P.J. Barnes* 41

Vitamin K_1 (phylloquinone) restores the turnover of FeS centers in the ether-extracted spinach PS I particles (FEB 06692) *S. Itoh, M. Iwaki* 47

A stereochemical model for cytokinin activity (FEB 06693) *Z.R. Korszun, C. Knight, C.-M. Chen* 53

Molecular structure of the human alcohol dehydrogenase 1 gene (FEB 06697) *Y. Matsuo, S. Yokoyama* 57

Nitrile hydratase of *Rhodococcus* sp. N-774: Purification and amino acid sequences (FEB 06683) *T. Endo, I. Watanabe* 61

Myristic acid is the NH_2-terminal blocking group of the 43-kDa protein of *Torpedo* nicotinic post-synaptic membranes (FEB 06682) *C. Carr, A.N. Tyler, J.B. Cohen* 65

Purification of the 22 kDa protein substrate of botulinum ADP-ribosyltransferase C3 from porcine brain cytosol and its characterization as a GTP-binding protein highly homologous to the *rho* gene product (FEB 06701) *U. Braun, B. Habermann, I. Just, K. Aktories, J. Vandekerckhove* 70

Treatment of intact hepatocytes with either the phorbol ester TPA or glucagon elicits the phosphorylation and functional inactivation of the inhibitory guanine nucleotide regulatory protein G_i (FEB 06702) *N.J. Pyne, G.J. Murphy, G. Milligan, M.D. Houslay* 77

Increase of glucose and lactate output and decrease of flow by human anaphylatoxin C3a but not C5a in perfused rat liver (FEB 06704) *G.P. Püschel, M. Oppermann, W. Muschol, O. Götze, K. Jungermann* 83

High-affinity Ca^{2+}-binding site inhibiting Ca^{2+} release from sarcoplasmic reticulum (FEB 06703) *A. Argaman, V. Shoshan-Barmatz* 88

A powerful method of sequential proton resonance assignment in proteins using relayed ^{15}N-^1H multiple quantum coherence spectroscopy (FEB 06634) *A.M. Gronenborn, A. Bax, P.T. Wingfield, G.M. Clore* 93

Notes to Authors 99

FEBS NEWS

FEBS Advanced Courses 1989 102

Discussion Letter

Cysteine proteases of positive strand RNA viruses and chymotrypsin-like serine proteases: A distinct protein superfamily with a common structural fold (FEB 06691) *A.E. Gorbalenya, A.P. Donchenko, V.M. Blinov, E.V. Koonin* 103

Hypothesis

Prediction of terminal protein and ribonuclease H domains in the gene P product of hepadnaviruses (FEB 06715) *Yu.E. Khudyakov, A.M. Makhov* 115

Research Letters

Expression of a human liver cDNA encoding a UDP-glucuronosyltransferase catalysing the glucuronidation of hyodeoxycholic acid in cell culture (FEB 06709) *S. Fournel-Gigleux, M.R. Jackson, R. Wooster, B. Burchell* 119

Published by Elsevier Science Publishers B.V. (Biomedical Division)
00145793/89/$3.50 © 1989 Federation of European Biochemical Societies

Electrostimulation-induced fast-to-slow transitions of myosin light and heavy chains in rabbit fast-twitch muscle at the mRNA level (FEB 06699) *B.J. Kirschbaum, A. Heilig, K.-T. Härtner, D. Pette* 123
D-Glycerate kinase deficiency as a cause of D-glyceric aciduria (FEB 06698) *E. Van Schaftingen* 127
Expression of the SmB′ splicing protein in rodent cells capable of following an alternative RNA splicing pathway (FEB 06707) *N.G. Sharpe, D.G. Williams, P. Norton, D.S. Latchman* 132
Genetic transfer of the pigment bacteriorhodopsin into the eukaryote *Schizosaccharomyces pombe* (FEB 06710) *V. Hildebrandt, M. Ramezani-Rad, U. Swida, P. Wrede, S. Grzesiek, M. Primke, G. Büldt* 137
Polyamines inhibit the ATP-dependent proteolytic pathway in rabbit reticulocyte lysates (FEB 06705) *E.F. Wajnberg, J.M. Fagan* 141
Stabilisation of cathepsin E by ATP (FEB 06706) *D.J. Thomas, A.D. Richards, R.A. Jupp, E. Ueno, K. Yamamoto, I.M. Samloff, B.M. Dunn, J. Kay* 145
Binding and oxidation of mutant cytochromes *c* by cytochrome-*c* oxidase (FEB 06708) *B. Michel, A.G. Mauk, H.R. Bosshard* 149
Polarographic observation of substrate-level phosphorylation and its stimulation by acetylcholine (FEB 06712) *M.N. Kondrashova, N.M. Doliba* 153
The nature of the Fe(III) EPR signal from the acceptor-side iron in photosystem II (FEB 06694) *R. Aasa, L.-E. Andréasson, S. Styring, T. Vänngård* 156
Predicted effects on herbicide binding of amino acid substitutions in the D1 protein of photosystem II (FEB 06700) *A. Horovitz, N. Ohad, J. Hirschberg* 161
Lignin peroxidase compound III: Formation, inactivation, and conversion to the native enzyme (FEB 06695) *H. Wariishi, M.H. Gold* 165
GTP-dependent and -independent activation of superoxide producing NADPH oxidase in a neutrophil cell-free system (FEB 06714) *K. Ishida, K. Takeshige, S. Takasugi, S. Minakami* 169
Ba^{2+}-sensitive K^+ channels in luminal-membrane vesicles from pars convoluta of rabbit proximal tubule (FEB 06719) *C. Jacobsen, H. Røigaard-Petersen, M.I. Sheikh* 173
Selective activation of the γ-subspecies of protein kinase C from bovine cerebellum by arachidonic acid and its lipoxygenase metabolites (FEB 06711) *M.S. Shearman, Z. Naor, K. Sekiguchi, A. Kishimoto, Y. Nishizuka* 177
Possible involvement of protein kinase C in proliferation and differentiation of osteoblast-like cells (FEB 06718) *O. Kozawa, K. Takatsuki, K. Kotake, M. Yoneda, Y. Oiso, H. Saito* 183
Synthesis of a (desSer1 Ile29 Leu89) chicken cystatin gene, expression in *E. coli* as fusion protein and its isolation (FEB 06717) *E.A. Auerswald, G. Genenger, I. Assfalg-Machleidt, J. Kos, W. Bode* 186
Molecular cloning and sequencing of the glycogen phosphorylase gene from *Escherichia coli* (FEB 06713) *Y.-L. Choi, M. Kawamukai, R. Utsumi, H. Sakai, T. Komano* 193
A novel lectin-independent interaction of P fimbriae of *Escherichia coli* with immobilized fibronectin (FEB 06716) *B. Westerlund, P. Kuusela, T. Vartio, I. van Die, T.K. Korhonen* 199
Molecular architecture of secretin receptors: the specific covalent labelling of a 51 kDa peptide after cross-linking of [^{125}I]iodo-secretin to intact rat pancreatic acini (FEB 06722) *D. Gossen, P. Poloczek, M. Svoboda, J. Christophe* 205
Complete amino acid sequence of the sarcoplasmic calcium-binding protein (SCP-I) from crayfish (*Astacus leptodactilus*) (FEB 06723) *J. Jauregui-Adell, W. Wnuk, J.A. Cox* 209
Effect of low density lipoproteins, high density lipoproteins, and cholesterol on apolipoprotein A-I mRNA in Hep G2 cells (FEB 06721) *J.C. Monge, J.M. Hoeg, S.W. Law, H.B. Brewer, jr* 213
Modes of action of uncouplers in thylakoids: External and internal pH profiles of electron transport (FEB 06720) *M. Schönfeld, H. Schickler* 218
The influence of stereospecific assignments on the determination of three-dimensional structures of proteins by nuclear magnetic resonance spectroscopy: Application to the sea anemone protein BDS-I (FEB 06669) *P.C. Driscoll, A.M. Gronenborn, G.M. Clore* 223
Mechanism of inhibition of papain by chicken egg white cystatin: Inhibition constants of N-terminally truncated forms and cyanogen bromide fragments of the inhibitor (FEB 06724) *W. Machleidt, U. Thiele, B. Laber, I. Assfalg-Machleidt, A. Esterl, G. Wiegand, J. Kos, V. Turk, W. Bode* 234
Identification of a functionally important carboxyl group in cellobiohydrolase I from *Trichoderma reesei*: A chemical modification study (FEB 06725) *P. Tomme, M. Claeyssens* 239
Eicosapentaenoic acid and docosahexaenoic acid are antagonists at the thromboxane A_2/prostaglandin H_2 receptor in human platelets (FEB 06727) *P.G. Swann, D.L. Venton, G.C. Le Breton* 244
Influence of thyroid status on the membranes of rat liver mitochondria: Unique localization of L-glycerol-3-phosphate dehydrogenase (FEB 06730) *Z. Beleznai, E. Amler, H. Rauchová, Z. Drahota, V. Jancsik* 247
pH-dependent fusion of reconstituted vesicular stomatitis virus envelopes with vero cells: Measurement by dequenching of fluorescence (FEB 06668) *M.-T. Paternostre, R.J. Lowy, R. Blumenthal* 251
Orientation and assignment of the four cytochrome hemes in *Rhodopseudomonas viridis* reaction centers (FEB 06729) *A. Vermeglio, P. Richaud, J. Breton* 259
The role of long-chain acyl-CoA in the damage of oxidative phosphorylation in heart mitochondria (FEB 06731) *V. Borutaitė, V. Mildažienė, L. Ivanovienė, B. Kholodenko, A. Toleikis, A. Praškevičius* 264
1,2-*sn*-Diacylglycerol accumulates in choline-deficient liver: A possible mechanism of hepatic carcinogenesis via alteration in protein kinase C activity? (FEB 06726) *J.K. Blusztajn, S.H. Zeisel* 267
Interferon (IFN)-like antiviral effect is induced by unspecific cross-linking of cell surface receptors (FEB 06728) *G. Premecz, A. Markovits, G. Bagi, T. Farkas, I. Földes* 271
Epinephrine and the Ca^{2+} ionophore A23187 synergistically induce platelet aggregation without protein kinase C activation (FEB 06732) *C. Olbrich, W. Siess* 275

The binding of ligands to the 55 kDa component of the interleukin-2 receptor triggers increased turnover of phosphate bound to an 85 kDa protein: Evidence for the role of cyclic AMP (FEB 06733) *A.R. Mire-Sluis, A.V. Hoffbrand, R.G. Wickremasinghe* 280

Phosphatidylinositol turnover is not a general regulator of neuroblastoma cell differentiation: comparison between two differentiating agents, retinoic acid and γ-interferon (FEB 06734) *M. Lanciotti, P. Cornaglia-Ferraris, M. Ponzoni* 285

A new heparin-inhibited and polyamine-activated protein kinase from bovine kidney (FEB 06735) *T.J. Singh* 289

Identification of the magnesium, europium and lead binding sites in *E. coli* and lupine $tRNA^{Phe}$ by specific metal ion-induced cleavages (FEB 06736) *T. Marciniec, J. Ciesiolka, J. Wrzesinski, W.J. Krzyżosiak* 293

Nucleotide residues of tRNA, directly interacting with proteins within the complex of the 30 S subunit of *E. coli* ribosome with poly(U) and NAcPhe-$tRNA^{Phe}$ (FEB 06737) *G.G. Abdurashidova, E.A. Tsvetkova, E.I. Budowsky* 299

Mechanisms of phototaxis and aerotaxis in *Halobacterium halobium* (FEB 06739) *S.I. Bibikov, V.P. Skulachev* 303

Maitotoxin, a potent, general activator of phosphoinositide breakdown (FEB 06742) *F. Gusovsky, T. Yasumoto, J.W. Daly* 307

Supercoil-stabilized left-handed DNA in the plasmid $(dA\text{-}dT)_{16}$ insert formed in the presence of Ni^{2+} (FEB 06738) *K. Nejedlý, J. Klysik, E. Paleček* 313

A liver-specific nuclear protein that binds to the distal promoter element of the rat tyrosine aminotransferase gene (FEB 06740) *V.V. Lobanenkov, E.M. Klenowa, V.V. Adler* 318

Changes in DNA methylation are associated with loss of insecticide resistance in the peach-potato aphid *Myzus persicae* (Sulz.) (FEB 06743) *L.M. Field, A.L. Devonshire, R.H. Ffrench-Constant, B.G. Forde* 323

Isoenzyme patterns of protein kinase C and a phospholipid-dependent but Ca^{2+}-inhibited enzyme fraction in the crude extracts of different tissues (FEB 06745) *A. Faragó, G. Farkas, G. Mészáros, L. Buday, F. Antoni, J. Seprődi* 328

Extracellular adenosine triphosphate activates phospholipase C and mobilizes intracellular calcium in primary cultures of sheep anterior pituitary cells (FEB 06744) *P.A. van der Merwe, I.K. Wakefield, J. Fine, R.P. Millar, J.S. Davidson* 333

L-Glutamate activates excitatory and inhibitory channels in *Drosophila* larval muscle (FEB 06746) *R. Delgado, R. Barla, R. Latorre, P. Labarca* 337

Evidence for the presence of two distinct sites of sucrose hydrolysis and glucosyl transfer activities on 1,3-α-D-glucan synthase of *Streptococcus mutans* (FEB 06750) *Y. Yamashita, N. Hanada, M. Itoh-Andoh, T. Takehara* 343

Complement C9 is inserted into membranes in a globular conformation (FEB 06749) *D. Marazziti, J.P. Luzio, K.K. Stanley* 347

Unique substrate specificity and regulatory properties of PKC-ε: a rationale for diversity (FEB 06747) *D. Schaap, P.J. Parker, A. Bristol, R. Kriz, J. Knopf* 351

Identification of the α_3-subunit in the $GABA_A$ receptor purified from bovine brain (FEB 06751) *F.A. Stephenson, M.J. Duggan, S.O. Casalotti* 358

Isolation and partial characterization of a protease from *Cucurbita ficifolia* (FEB 06752) *E. Curotto, G. González, S. O'Reilly, G. Tapia* 363

Purification and crystallization of ferric enterobactin receptor protein, FepA, from the outer membranes of *Escherichia coli* UT5600/pBB2 (FEB 06748) *M.A.F. Jalal, D. van der Helm* 366

Monoclonal antibodies against the S_2-serotonin receptor from rat brain that cross-react with dopamine and opiate receptors (FEB 06754) *M. Deckmann, M. Shinitzky* 371

Localization of melted regions in supercoiled DNA (FEB 06755) *O.N. Voloshin, L.S. Shlyakhtenko, Yu.L. Lyubchenko* 377

The expression of genes coding for positive acute-phase proteins in the reproductive tract of the female rat: High levels of ceruloplasmin mRNA in the uterus (FEB 06756) *T. Thomas, G. Schreiber* 381

Two physiological substrate-specific casein kinases are present in the bovine mammary gland (FEB 06757) *C.L. Brooks* 385

Isolated fungal cellulase terminal domains and a synthetic minimum analogue bind to cellulose (FEB 06759) *G. Johansson, J. Ståhlberg, G. Lindeberg, Å. Engström, G. Pettersson* 389

Differential binding of IL-1α and IL-1β to receptors on B and T cells (FEB 06758) *G. Scapigliati, P. Ghiara, M. Bartalini, A. Tagliabue, D. Boraschi* 394

1,2-Diacylglycerol accumulation in human neutrophils does not correlate with respiratory burst activation (FEB 06760) *L. Koenderman, A. Tool, D. Roos, A.J. Verhoeven* 399

Inhibition of stimulus-dependent epidermal growth factor receptor and transforming growth factor-α mRNA accumulation by the protein kinase C inhibitor staurosporine (FEB 06761) *J.D. Bjorge, J.E. Kudlow, G.B. Mills, A.J. Paterson* 404

Variability in electrophoretic mobility of G_i-like proteins: effect of SDS (FEB 06762) *J. Jones, G.S. Kopf, R.M. Schultz* 409

Specificity of GDP-Man:dolichyl-phosphate mannosyltransferase for the guanosine diphosphate esters of mannose analogues containing deoxy and deoxyfluoro substituents (FEB 06763) *W. McDowell, R.T. Schwarz* 413

Author Index 417

Table of Contents 423

Notes to Authors 426

FEBS NEWS

FEBS Advanced Courses 1989 428